

**Pt. 51, Subpt. S, App. E**

(6) *Speed indications.* The dynamometer speed display shall have a range of 0–60 mph, and a resolution and accuracy of at least 1 mph.

(7) *Safety interlock.* A roll speed sensor and safety interlock circuit shall be provided which prevents the application of the roll brakes and upward lift movement at any roll speed above 0.5 mph.

(b) The dynamometer shall produce the load speed relationships specified in paragraphs (III) and (V) of appendix B to this subpart.

*(III) Transient Emission Test Equipment*  
[Reserved]

*(IV) Evaporative System Purge Test Equipment*  
[Reserved]

*(V) Evaporative System Integrity Test Equipment* [Reserved]

[57 FR 52987, Nov. 5, 1992, as amended at 58 FR 59367, Nov. 9, 1993]

**APPENDIX E TO SUBPART S OF PART 51—  
TRANSIENT TEST DRIVING CYCLE**

(I) *Driver's trace.* All excursions in the transient driving cycle shall be evaluated by the procedures defined in §86.115–78(b)(1) and §86.115(c) of this chapter. Excursions exceeding these limits shall cause a test to be void. In addition, provisions shall be available to utilize cycle validation criteria, as described in §86.1341–90 of this chapter, for trace speed versus actual speed as a means to determine a valid test.

(II) *Driving cycle.* The following table shows the time speed relationship for the transient IM240 test procedure.

Second	MPH
0 .....	0
1 .....	0
2 .....	0
3 .....	0
4 .....	0
5 .....	3
6 .....	5.9
7 .....	8.6
8 .....	11.5
9 .....	14.3
10 .....	16.9
11 .....	17.3
12 .....	18.1
13 .....	20.7
14 .....	21.7
15 .....	22.4
16 .....	22.5
17 .....	22.1
18 .....	21.5
19 .....	20.9
20 .....	20.4
21 .....	19.8
22 .....	17
23 .....	14.9
24 .....	14.9
25 .....	15.2
26 .....	15.5
27 .....	16
28 .....	17.1
29 .....	19.1
30 .....	21.1
31 .....	22.7
32 .....	22.9
33 .....	22.7
34 .....	22.6
35 .....	21.3
36 .....	19
37 .....	17.1
38 .....	15.8
39 .....	15.8
40 .....	17.7
41 .....	19.8
42 .....	21.6
43 .....	23.2
44 .....	24.2
45 .....	24.6
46 .....	24.9
47 .....	25
48 .....	25.7
49 .....	26.1
50 .....	26.7
51 .....	27.5
52 .....	28.6
53 .....	29.3
54 .....	29.8
55 .....	30.1
56 .....	30.4
57 .....	30.7
58 .....	30.7
59 .....	30.5
60 .....	30.4
61 .....	30.3
62 .....	30.4
63 .....	30.8
64 .....	30.4
65 .....	29.9
66 .....	29.5
67 .....	29.8
68 .....	30.3
69 .....	30.7
70 .....	30.9
71 .....	31
72 .....	30.9
73 .....	30.4
74 .....	29.8
75 .....	29.9
76 .....	30.2
77 .....	30.7
78 .....	31.2
79 .....	31.8
80 .....	32.2
81 .....	32.4
82 .....	32.2
83 .....	31.7
84 .....	28.6
85 .....	25.1
86 .....	21.6
87 .....	18.1
88 .....	14.6
89 .....	11.1
90 .....	7.6
91 .....	4.1
92 .....	0.6
93 .....	0
94 .....	0
95 .....	0
96 .....	0
97 .....	0
98 .....	3.3
99 .....	6.6

**40 CFR Ch. I (7-1-11 Edition)**

Second	MPH
26 .....	15.5
27 .....	16
28 .....	17.1
29 .....	19.1
30 .....	21.1
31 .....	22.7
32 .....	22.9
33 .....	22.7
34 .....	22.6
35 .....	21.3
36 .....	19
37 .....	17.1
38 .....	15.8
39 .....	15.8
40 .....	17.7
41 .....	19.8
42 .....	21.6
43 .....	23.2
44 .....	24.2
45 .....	24.6
46 .....	24.9
47 .....	25
48 .....	25.7
49 .....	26.1
50 .....	26.7
51 .....	27.5
52 .....	28.6
53 .....	29.3
54 .....	29.8
55 .....	30.1
56 .....	30.4
57 .....	30.7
58 .....	30.5
59 .....	30.4
60 .....	30.3
61 .....	30.4
62 .....	30.4
63 .....	30.8
64 .....	30.4
65 .....	29.9
66 .....	29.5
67 .....	29.8
68 .....	30.3
69 .....	30.7
70 .....	30.9
71 .....	31
72 .....	30.9
73 .....	30.4
74 .....	29.8
75 .....	29.9
76 .....	30.2
77 .....	30.7
78 .....	31.2
79 .....	31.8
80 .....	32.2
81 .....	32.4
82 .....	32.2
83 .....	31.7
84 .....	28.6
85 .....	25.1
86 .....	21.6
87 .....	18.1
88 .....	14.6
89 .....	11.1
90 .....	7.6
91 .....	4.1
92 .....	0.6
93 .....	0
94 .....	0
95 .....	0
96 .....	0
97 .....	0
98 .....	3.3
99 .....	6.6

**Environmental Protection Agency**

	Second	MPH
100 .....	9.9	
101 .....	13.2	
102 .....	16.5	
103 .....	19.8	
104 .....	22.2	
105 .....	24.3	
106 .....	25.8	
107 .....	26.4	
108 .....	25.7	
109 .....	25.1	
110 .....	24.7	
111 .....	25.2	
112 .....	25.4	
113 .....	27.2	
114 .....	26.5	
115 .....	24	
116 .....	22.7	
117 .....	19.4	
118 .....	17.7	
119 .....	17.2	
120 .....	18.1	
121 .....	18.6	
122 .....	20	
123 .....	20.7	
124 .....	21.7	
125 .....	22.4	
126 .....	22.5	
127 .....	22.1	
128 .....	21.5	
129 .....	20.9	
130 .....	20.4	
131 .....	19.8	
132 .....	17	
133 .....	204	
134 .....	17.1	
135 .....	15.8	
136 .....	15.8	
137 .....	17.7	
138 .....	19.8	
139 .....	21.6	
140 .....	22.2	
141 .....	24.5	
142 .....	24.7	
143 .....	24.8	
144 .....	24.7	
145 .....	24.6	
146 .....	24.6	
147 .....	25.1	
148 .....	25.6	
149 .....	25.7	
150 .....	25.4	
151 .....	24.9	
152 .....	25	
153 .....	25.4	
154 .....	26	
155 .....	26	
156 .....	25.7	
157 .....	26.1	
158 .....	26.7	
159 .....	27.3	
160 .....	30.5	
161 .....	33.5	
162 .....	36.2	
163 .....	37.3	
164 .....	39.3	
165 .....	40.5	
166 .....	42.1	
167 .....	43.5	
168 .....	45.1	
169 .....	46	
170 .....	46.8	
171 .....	47.5	
172 .....	47.5	
173 .....	47.3	
	47.2	

**Pt. 51, Subpt. S, App. E**

	Second	MPH
174 .....	47.2	
175 .....	47.4	
176 .....	47.9	
177 .....	48.5	
178 .....	49.1	
179 .....	49.5	
180 .....	50	
181 .....	50.6	
182 .....	51	
183 .....	51.5	
184 .....	52.2	
185 .....	53.2	
186 .....	54.1	
187 .....	54.6	
188 .....	54.9	
189 .....	55	
190 .....	54.9	
191 .....	54.6	
192 .....	54.6	
193 .....	54.8	
194 .....	55.1	
195 .....	55.5	
196 .....	55.7	
197 .....	56.1	
198 .....	56.3	
199 .....	56.6	
200 .....	56.7	
201 .....	56.7	
202 .....	56.3	
203 .....	56	
204 .....	55	
205 .....	53.4	
206 .....	51.6	
207 .....	51.8	
208 .....	52.1	
209 .....	52.5	
210 .....	53	
211 .....	53.5	
212 .....	54	
213 .....	54.9	
214 .....	55.4	
215 .....	55.6	
216 .....	56	
217 .....	56	
218 .....	55.8	
219 .....	55.2	
220 .....	54.5	
221 .....	53.6	
222 .....	52.5	
223 .....	51.5	
224 .....	50.5	
225 .....	48	
226 .....	44.5	
227 .....	41	
228 .....	37.5	
229 .....	34	
230 .....	30.5	
231 .....	27	
232 .....	23.5	
233 .....	20	
234 .....	16.5	
235 .....	13	
236 .....	9.5	
237 .....	6	
238 .....	2.5	
239 .....	0	

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